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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/748,367 | 12/30/2003 | John E. Maloney | TPI-0604 | 7782 |

23377 7590 10/17/2005
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| EXAMINER |
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STEIN, JULIE E

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| ART UNIT | PAPER NUMBER |
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2688

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|---------------------------------------|--|
| Office Action Summary | Application No. 10/748,367 | Applicant(s) MALONEY ET AL. | |
| | Examiner Julie E. Stein, Esq. | Art Unit 2685 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

By

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 7, 9-12, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over "The Qualcomm/SnapTrack Wireless-Assisted GPS Hybrid Positioning System and Results from Initial Commercial Deployments" to Z. Biacs et al. in view of U.S. Patent Application Publication No. 2004/0203853 to Sheynblat.

Biacs teaches all the steps/elements of independent claims 1 and 11, including a method and system for the determination of the location of a mobile station (MS) (abstract) equipped with embedded GPS signal reception capability (Abstract) and equipped to operate within a wireless communications network (Abstract,

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terrestrial/cellular), the method/system comprising: (a) receiving GPS data (Introduction), said GPS data being received from a MS to be located (Introduction); (b) receiving a communications-band signal from said MS to be located (Introduction) and using the location-measurement facilities to extract location-related characteristic data from the communications-band signal (Terrestrial Measurements); and (c) performing location-determination calculation using the GPS data and the extracted location-related characteristic data to derive an estimated location for the MS (Position Estimation).

However, Biacs does not explicitly teach receiving the GPS data at a land station, receiving a communications-band signal at a land station equipped with location-measurement facilities, or performing location-determination calculation at a land station equipped for location-determination calculations. But, Biacs does teach that the GPS and communications-band signal are received by a PDE. In addition, Sheynblat teaches in the same field of invention, a hybrid location system, that a location server, such as a PDE can be a base station thus a ground station. See paragraph 31.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify Biacs such that the PDE is located at a base station as taught by Sheynblat because as shown in Biacs in Figures and 1 and 2, the PDE/LCS are computers/servers and Sheynblat teaches that these servers can be located in base stations.

Biacs in view of Sheynblat teach all the steps/elements of claims 2 and 20, including providing assistance data to the MS to be located, said assistance data

enhancing the ability of the MS to receive GPS signals and extract TOA or pseudorange measures, wherein said TOA or pseudorange measures are then communicated to the said land station equipped with location-measurement facilities. See, Sheynblat, paragraphs 31 to 32.

Biacs in view of Sheynblat teach all the steps/elements of claims 3 and 12, including communicating the GPS data and the extracted location-related characteristic data to said land station equipped for location-determination calculations. See, Biacs System Overview.

Biacs in view of Sheynblat teach all the steps/elements of claims 7 and 16, including wherein said location-related characteristic data extracted from the communications-band signal includes data concerning signal strength or propagation loss. See Sheynblat paragraph 24.

Biacs in view of Sheynblat teach all the steps/elements of claims 9 and 18, including using collateral information in performing said location-determination calculations. See, Sheynblat paragraph 31, the almanac information.

Biacs in view of Sheynblat teach all the steps/elements of claims 10 and 19, including wherein said method is employed to achieve applicable FCC accuracy requirements for E-911. See, Biacs Abstract.

4. Claims 4-6, 8, 13-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biacs in view of Sheynblat as applied to claims 1 and 11 above, and further in view of U.S. Patent Application No. 2005/0012611 to Osman.

Biacs in view of Sheynblat teach all the steps/elements of claims 4-6, 8, 13-15, and 17, except wherein said location-related characteristic data extracted from the communications-band signal includes TOA, TDOA, AOA, or TA data. But, Sheynblat does teaches that well known trilateration techniques could be used in hybrid locating systems by a PDE to locate a user terminal. See paragraph 32. In addition, Osman teaches that the above trilateration techniques are well known in the art as ways of location a user terminal in a cellular network. See paragraph 8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify Biacs in view of Sheynblat to use any of the above well known trilateration cellular techniques in a hybrid location system with GPS because the techniques are well known in the art as taught by Osman and Sheynblat teaches that such trilateration techniques can be used hybrid location system.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application Publication No. 2005/0037775 to Moeglein et al. teaches a hybrid location method and system for locating a mobile station.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie E. Stein, Esq. whose telephone number is (571) 272-7897. The examiner can normally be reached on M-F (8:30 am-5:00 pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JES


GEORGE ENG
PRIMARY EXAMINER